

Names: \_\_\_\_\_

# BRIDGES

Use this worksheet to answer the questions from the Bridges Web Quest activity. Remember, you only need one worksheet per team of students. This worksheet is worth up to 40 points.

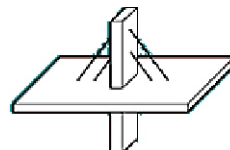
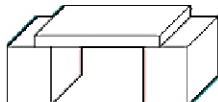
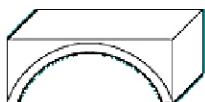
## 1 What kind of Engineer builds bridges?

2 points

\_\_\_\_\_

## 2 Name That Bridge

4 points



## 3 Bridge Strengths & Weaknesses

16 points

Bridge	Span	Construction Material	Advantages	Disadvantages
				
				
				
				

## 4 Forces on Bridges

4 points

Define the words and label the drawing.

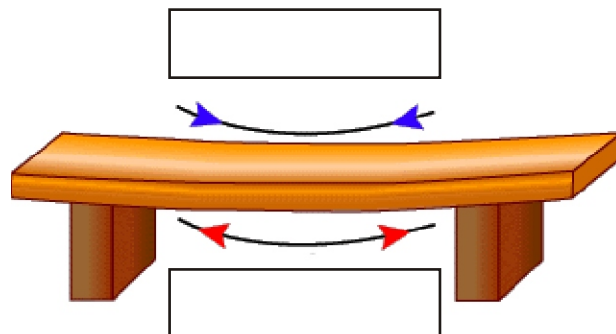
Compression: \_\_\_\_\_

\_\_\_\_\_

Tension: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Names: \_\_\_\_\_

# BRIDGES

Make a drawing of the following types of trusses:

## 5 Sketch Truss Designs

7 points

Deck Truss



Through Truss



Arch Type



Baltimore (Pratt) Truss



Double Warren Truss



Suspension  
or  
Cable-Stayed



Wichert Truss



## 6 4 Describing Factors

4 points

Span: \_\_\_\_\_

Material: \_\_\_\_\_

Placement of Travel Surface: \_\_\_\_\_

Form: \_\_\_\_\_

## 7 Forces Lab

3 points

Which material is the strongest in compression? (circle one)

Wood   Plastic   Aluminum   Brick   Concrete   Reinforced Concrete   Cast Iron   Steel

Which material is the strongest in tension? (circle one)

Wood   Plastic   Aluminum   Brick   Concrete   Reinforced Concrete   Cast Iron   Steel

What is the strongest shape to use when designing a bridge? (circle one)

Rectangle   Arch   Triangle